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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,720	03/25/2004	William Leon Rugg	STL11848	8178
7590	03/09/2006			
David K. Lucente, Seagate Technology LLC Intellectual Property - COL2LGL 389 Disc Drive Longmont, CO 80503			EXAMINER NGUYEN, THINH T	
			ART UNIT 2818	PAPER NUMBER

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/809,720	Applicant(s) RUGG ET AL.	
	Examiner Thinh T. Nguyen	Art Unit 2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 14-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/25/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED OFFICE ACTION

1. Applicant's election **with traverse** of claims **1-13** in the communication with the Office on 12/06/2003 is acknowledged.

Because Applicant did not distinctly and specifically point out the supposed error in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Applicants have the right to file a divisional, continuation or continuation-in-part application covering the subject matter of the non-elected claims.

The traversal is on the ground(s) that see the election paper. The traversal on the restriction between device and method is not found persuasive because the fields of search for method and device claims are NOT coextensive and the determinations of patentability of method and device claims are different, that is process limitations and device limitations are given weight differently in determining the patentability of the claimed inventions. Also, the strategies for doing text searching of the device claims and method claims are different. Thus, separate searches are required. Moreover, another example of distinctness between the device and method claim is that in the method of claim 26 wherein the controller connected to first and second chip is used for flash memory and not for disk drive.

For species restriction, the species are distinct because the device of claim 1 represented Species I the requirement is a minimum of one electrical connector is required for species I, meanwhile for species II, the requirement is a minimum of two electrical connectors.

The requirement is still deemed proper and is therefore made **FINAL**.

Specification

2. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant cooperation is requested in correcting any errors of which the applicant may become aware in the specification.

Claim Objection

3. claim 10 is objected to for the following informality:
- the first line of claim 10 has a typo error : -- “ The apparatus of claim 8 “ -- should be:
- the Apparatus of claim 9 – since claim 8 has no controller or channel.
- Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this office action.

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claim 1-8, 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Masuda et al. (U.S. Patent 6,538,331) .

REGARDING CLAIM 1

Masuda discloses (,fig 2, fig 3, fig 4(a) and 4(b) an apparatus comprising: at least two dice (fig 3, ref 1A) ; each of said dice having at least one electrical connection (fig 4 ref 6a, ref 6b, ref 5) disposed on a single surface; said dice electrically coupled with at least one connector (ref 5 fig 4(b)) between said electrical connections that are oriented in the same direction when said dice are stacked and offset.

REGARDING CLAIM 2

Masuda discloses (fig 2, fig 3, fig 4(a) and 4(b)) an apparatus with two identical chips.
(fig 2 ref 1A)

REGARDING CLAIM 3

Masuda discloses (fig 2, fig 3, fig 4(a) and 4(b)) an apparatus wherein a least one electrical connection is disposed only on one surface (the top surface)

FIG. 2

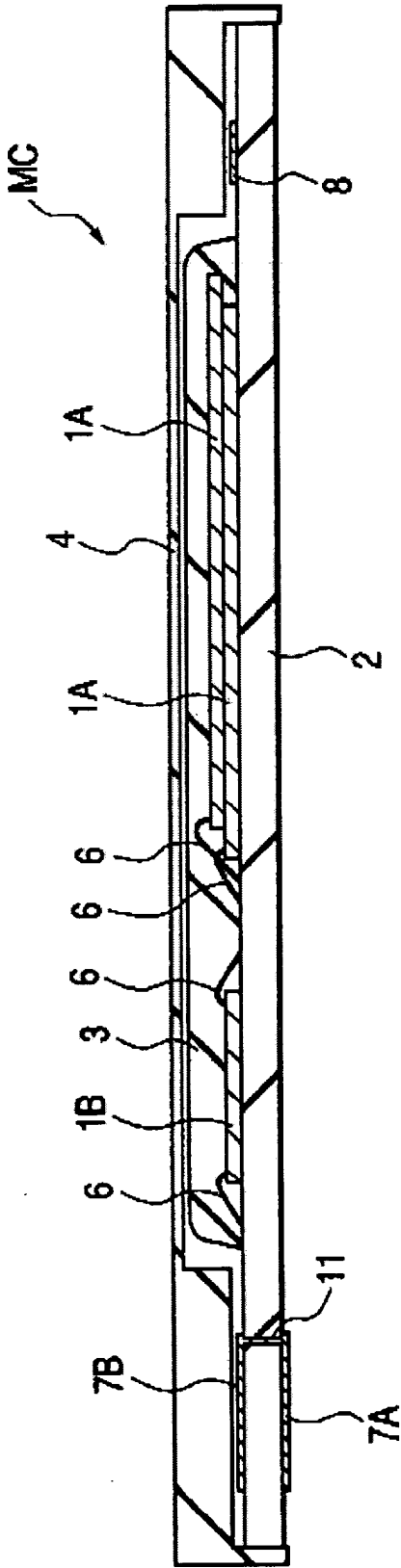


FIG. 3

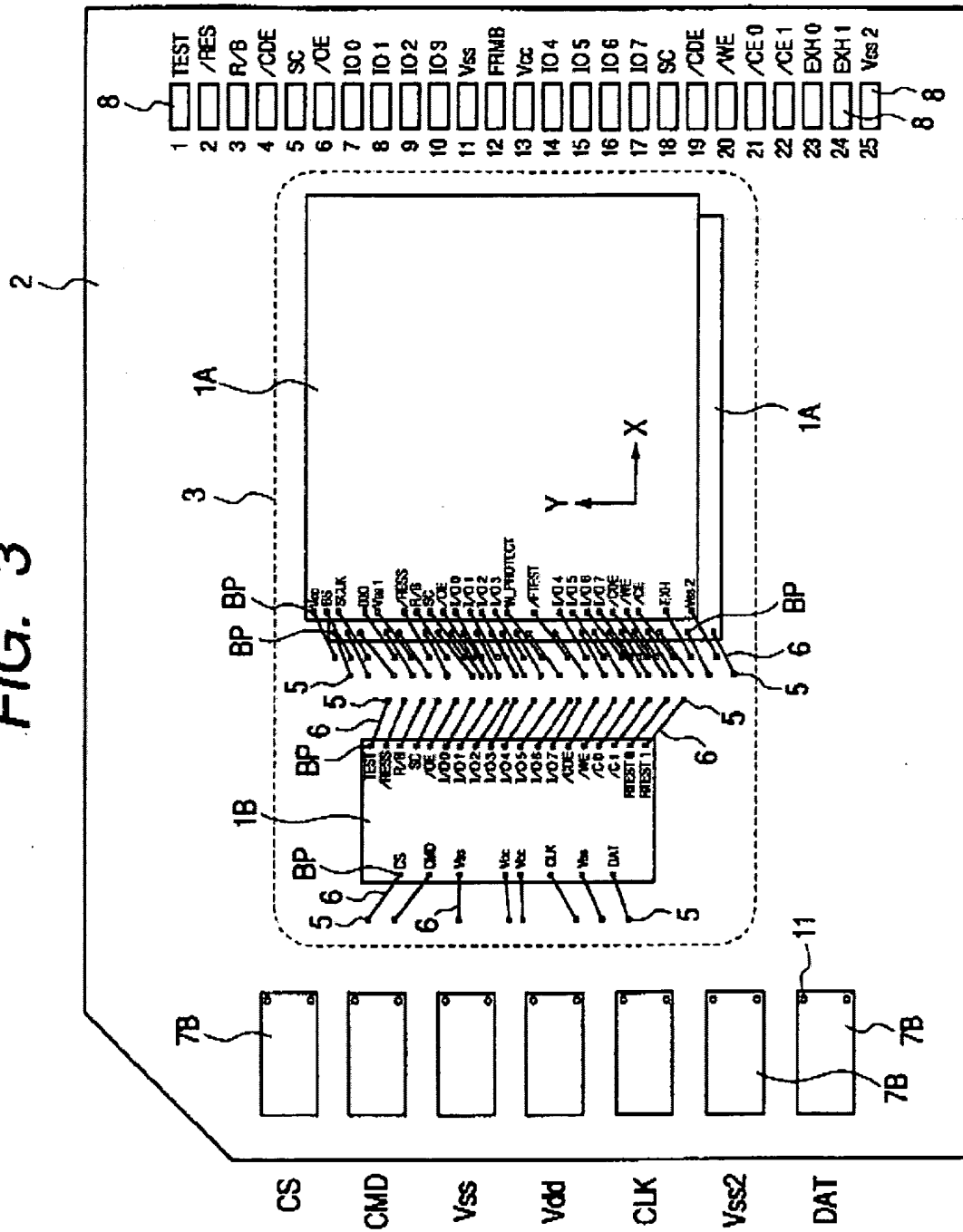


FIG. 4(a)

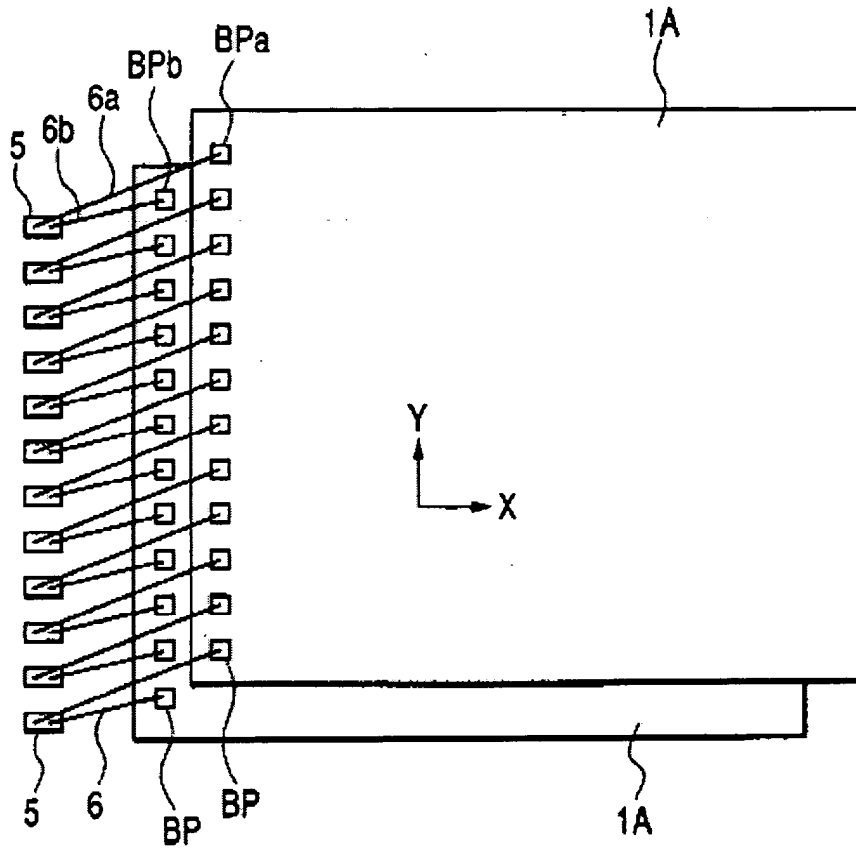
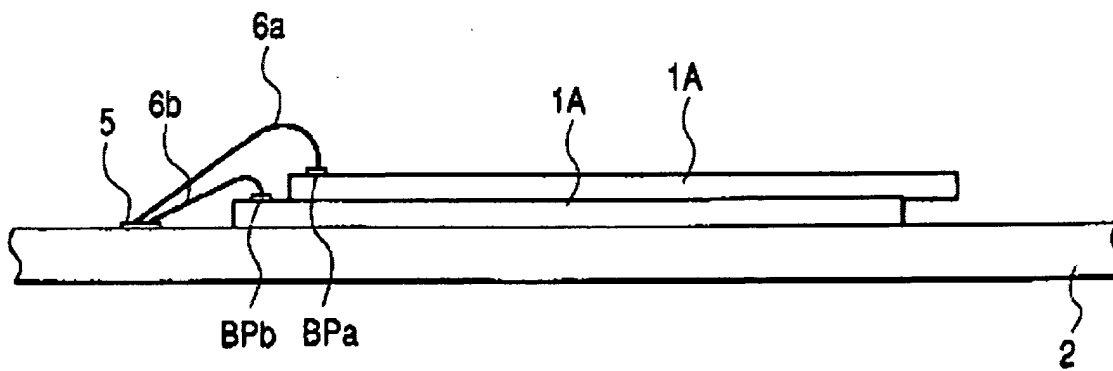


FIG. 4(b)



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REGARDING CLAIM 4,5

Masuda discloses (in fig 4(a) and 4(b)) an apparatus wherein the said dices are aligned.
and are attached.

REGARDING CLAIM 6

Masuda discloses (in fig 4(a) and 4(b), column 4 line 21-23) an apparatus wherein the
said dices are attached with adhesive.

REGARDING CLAIM 7,8

Masuda discloses (in fig 4(a) and 4(b), column 1 lines 15-16) an apparatus wherein the
said dices are DRAM memory devices

REGARDING CLAIM 11,12

Masuda discloses (in fig 4(a) and 4(b),) an apparatus wherein said electrical connections
from one die to another are made through intermediate electrical connections external from
said dice(fig 4 reference 5) and wherein said electrical connections are disposed on one edge.
(the left side edge from the top view in fig 4(a).

REGARDING CLAIM 13

Masuda discloses (in fig 4(a) and 4(b),column 1 lines 15) an apparatus that includes
flash memory and flash memory are inherently storage devices.

Claim Rejections - 35 USC § 103

6. The following is a quotation of U.S.C. 103(a) which form the basis for all obviousness
rejections set forth in this office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9,10 are rejected under 102(e) as being anticipated by or , in the alternative, under 103(a) being as being obvious over Masuda (U.S. patent 6,538,331)

REGARDING CLAIM 9

Masuda discloses all the invention including a dynamic random access memory coupled to a controller (1B, Fig. 3). Missing in Masuda's disclosure is the specific disclosure of a channel that controls read and write function ("channel" as defined by Applicant, Page 1, lines 20-21). However, Masuda's controller 1B, which controls memory dice (1A, 1A, Fig. 3), which involves providing power to, reading memory from and/or writing memory to the memory dice.

Therefore, it would appear that Masuda's controller 1B has the "channel" function as claimed by Applicant.

REGARDING CLAIM 10

Masuda (in fig 2) discloses a package in which the controller and memory is package in a single package.

8. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and the page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

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9. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to be abandoned (see M.P.E.P. 710.02(b)).

CONCLUSION

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thinh T Nguyen whose telephone number is 571-272-1790. The examiner can normally be reached on Monday-Friday 9:30am-6: 30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached at 571-272-1787.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval [PAIR] system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thinh T. Nguyen



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David Nelms
Supervisory Patent Examiner
Technology Center 2800